

R2O – the view from academia
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Government model 6.1-6.6. Imperfect but you can “bin” money programmatically.

What is the problem?

IOOS covers the span of 6.1-6.6

There is no incentive in OOI to look operationally. The left side of the equation is fully capitalized – the other side is not – has to be more entrepreneurial.

What is the academic reward to focus efforts in operational support? There is none.

The whole IOOS enterprise is fragile. Various fed agencies but NOAA is lead – other agencies know this. The white spaces are increasing between feds. The expertise, knowledge base and enthusiasm are in academe. It doesn't need to live permanently in academe – but don't throw it over yet.

What are the research aspects of IOOS? The research aspect of IOOS should focus on more mission needs. User driven – mission defined.

What is the transition point from academe to industry?

What are the challenges to R2O? What is the market driver?

Why give the care and feeding to academe v. private sector? Should keep it in w/academe until the IOOS matures. Maybe not care and feeding – but...

There will always be a role in academe in IOOS.

There isn't enough capitalization to sustain industry. Need academe to provide this...

Federal role in IOOS – fund observing gaps. Also, fund the connection to societal goals (nationally) – e.g., data and standards. Maybe the model Feds should fund fed priorities – the state should fund that which is beyond the fed fund priority. But...this may result in a system of haves and have nots.

Why do we want RAs and RCOOS? Because it is the most cost effective way to meet agency mission.

1. Do RCOOSs represent working examples of bridging academia to operations? RCOOS present examples of how academe. Expertise can be used to meet operational needs.
2. What are the roles of RCOOSs? Increased spatial resolution
3. How can O & M costs be supported for long-term observations?

Proposition gov initiatives have helped in capitalizing assets but what about long term O&M? There has to be a dedicated funding stream. Success for funding will be a regional solution? There will be different solutions per regions. The alternative is to go back to baseline. Make sure there is a sustained baseline.

4. What are the key enablers and key constraints to developing and maintaining such a relationship?

5. What do you think would be the primary drivers impacting the expected ROI?

6. What are the key aspects of a successful research to operations paradigm? Instrument pool perspective/multi-region. Multiple entities involved – collaboration. Don't need to reinvent the wheel. "Collaboratory". Strong communications, transparent process, cooperative members of the research team.

There needs to be a shared responsibility for R2O both developer and operator.

Design – part of the paradigm. Part of the design that you go into the research with is completely in the context of the transition. Framing the issues – framing the questions. Design team – planners & engineers all in the same room together. Conversely – need to have pull from operations.

7. Which aspects of the required operational infrastructure are the most technologically immature?

Real time no wet lab work chem. Bio sensors. On autonomous platforms. Movement from data logging to real-time. Power, ability to communicate reliably, you have to know where they are. What are the impediments for developing technologies?

Models are not mature enough for predictive capability. Better models will have to assimilate data from a variety of

Sensor and payloads are a larger impediment than platforms.